



**Interdisciplinary  
Science Forum**

In association with



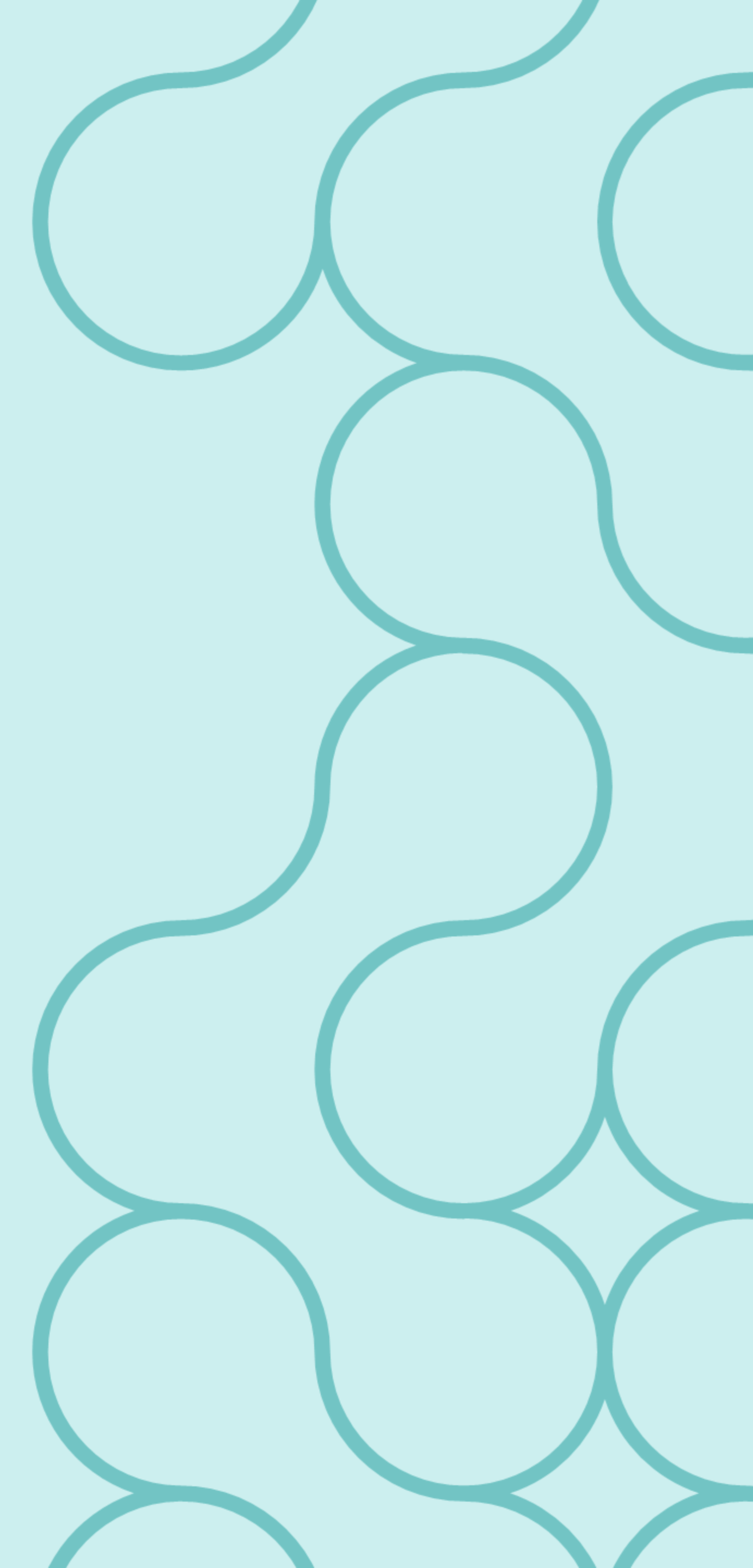
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# **ISR Data and Rankings Masterclass Americas**

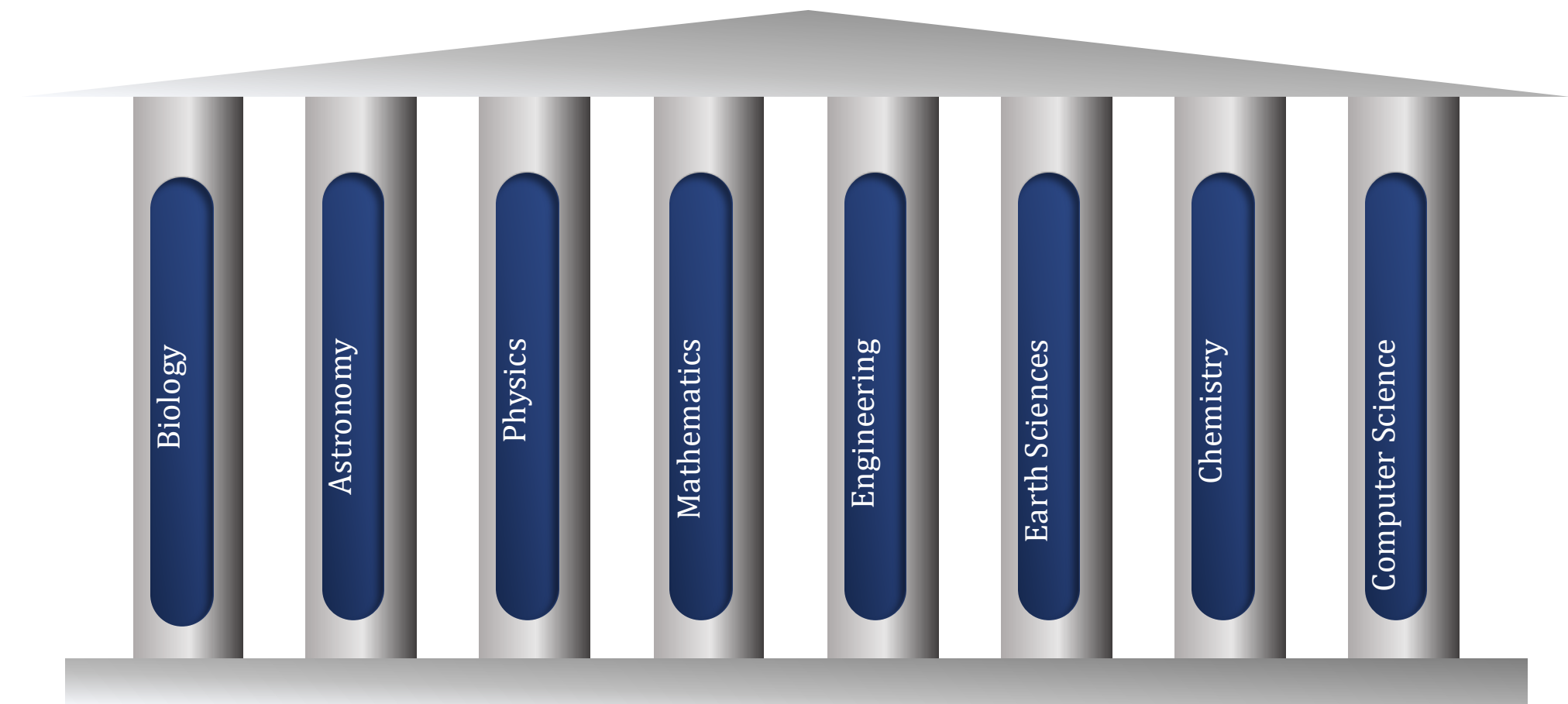
**Billy Wong**

Principal data scientist

THE



# Why interdisciplinary science?



# How can we get there?

- We need to identify ways to encourage greater support, better infrastructure, and the right incentives and rewards for interdisciplinary science to help break down the silos that have grown up around the disciplines

# How can we get there?

## Interdisciplinary Science Rankings

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# Our philosophy for the Rankings

- Step-wise development
- Engagement with broad range of stakeholders
- Iteration and co-creation of metrics and data collection
- Commitment to a dialogue with the sector
- Transparent metrics



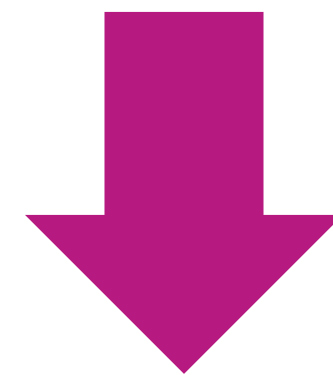
# Our aims for the Interdisciplinary Science Rankings

- To recognize, incentivize, and celebrate interdisciplinary science
- Provide the university sector with the data to measure and benchmark interdisciplinary achievement
- Recognize and reward universities leading on support for interdisciplinary science
- Promote best practices and incentivize change
- Develop new measures and metrics for interdisciplinary science



# THE's Ranking Family

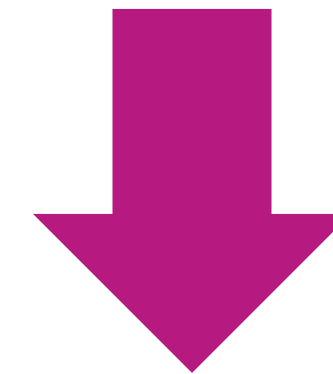
## RESEARCH



**Focus:** research output, research quality, research collaboration, reputation + more

**Participation rules:** 1,000+ publications over 5 years, teach undergraduates across a range of subjects

## IMPACT & SUSTAINABILITY



**Focus:** research, teaching, stewardship and outreach against the UN's 17 Sustainable Development Goals

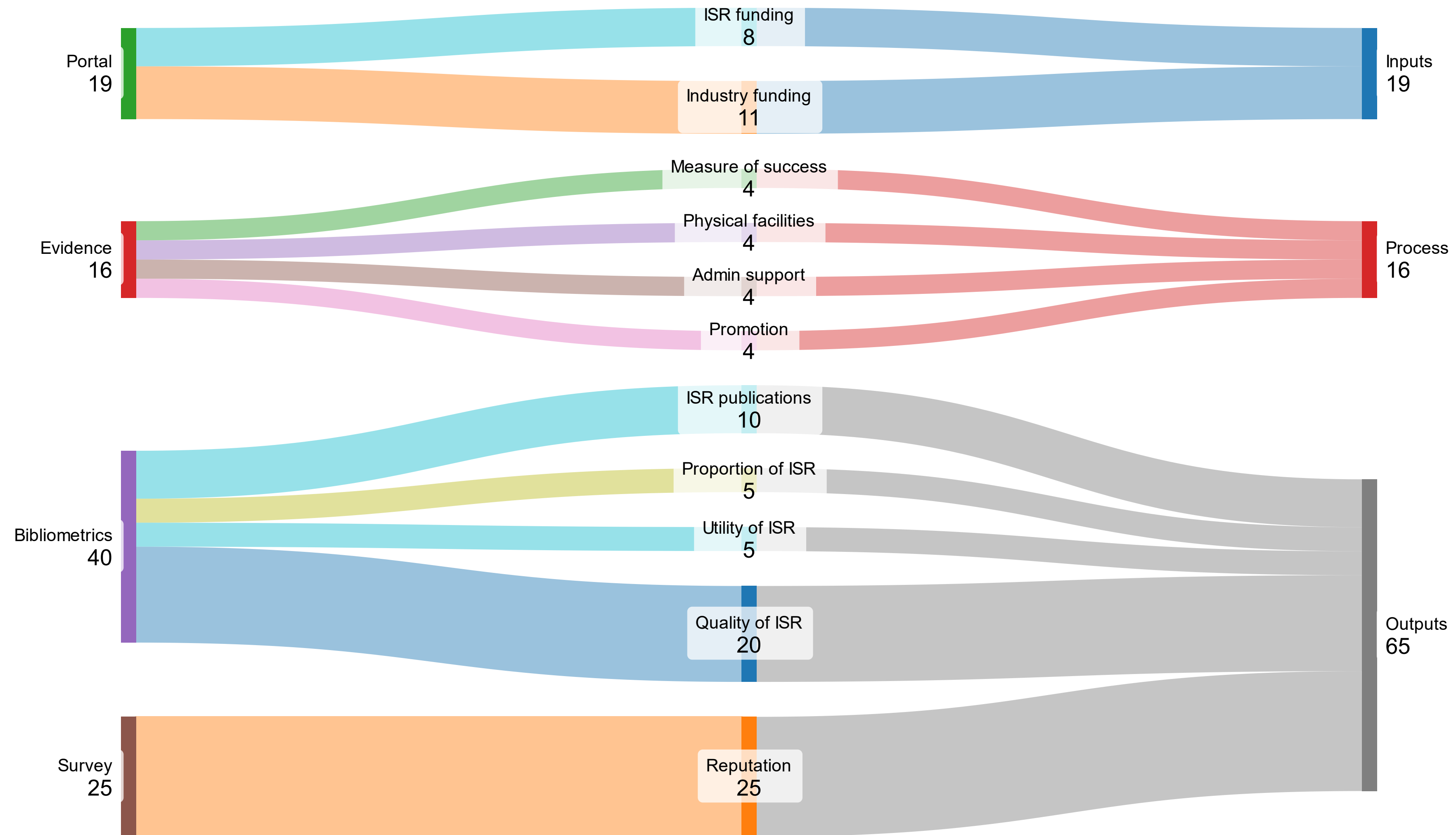
**Participation rules:** all UG or PG higher education institutions

# Insights





# Methodology



# How to identify IS research?

- In Scopus every publication is tagged with a set of subjects (or “subfields”) and relevance scores e.g. {‘Computer Science’: 0.3, ‘Biology’: 0.7}

- We can format these scores into a vector  $S$



- Matrix  $A$  which counts that co-occurrence of subjects can be defined as

$$A = \sum_i S_i \frac{1}{2} S_i \frac{1}{2}^T$$

- Let  $D$  be the Distance matrix.  $D_{u,v} = Norm(A_u - A_v)$

- The IS score of the document is

$$\frac{1}{S^2} D \left( \frac{1}{S^2} \right)^T$$

- A publication is considered IS if its IS score is in the top 25% percentile of all eligible publications

# Introducing Interdisciplinary Science Rankings 2025



**Impact  
Rankings**



2019



556 / 462



80 / 76

**Interdisciplinary  
Science  
Rankings**



2024



749



92



**World  
University  
Rankings**



2011



201



26



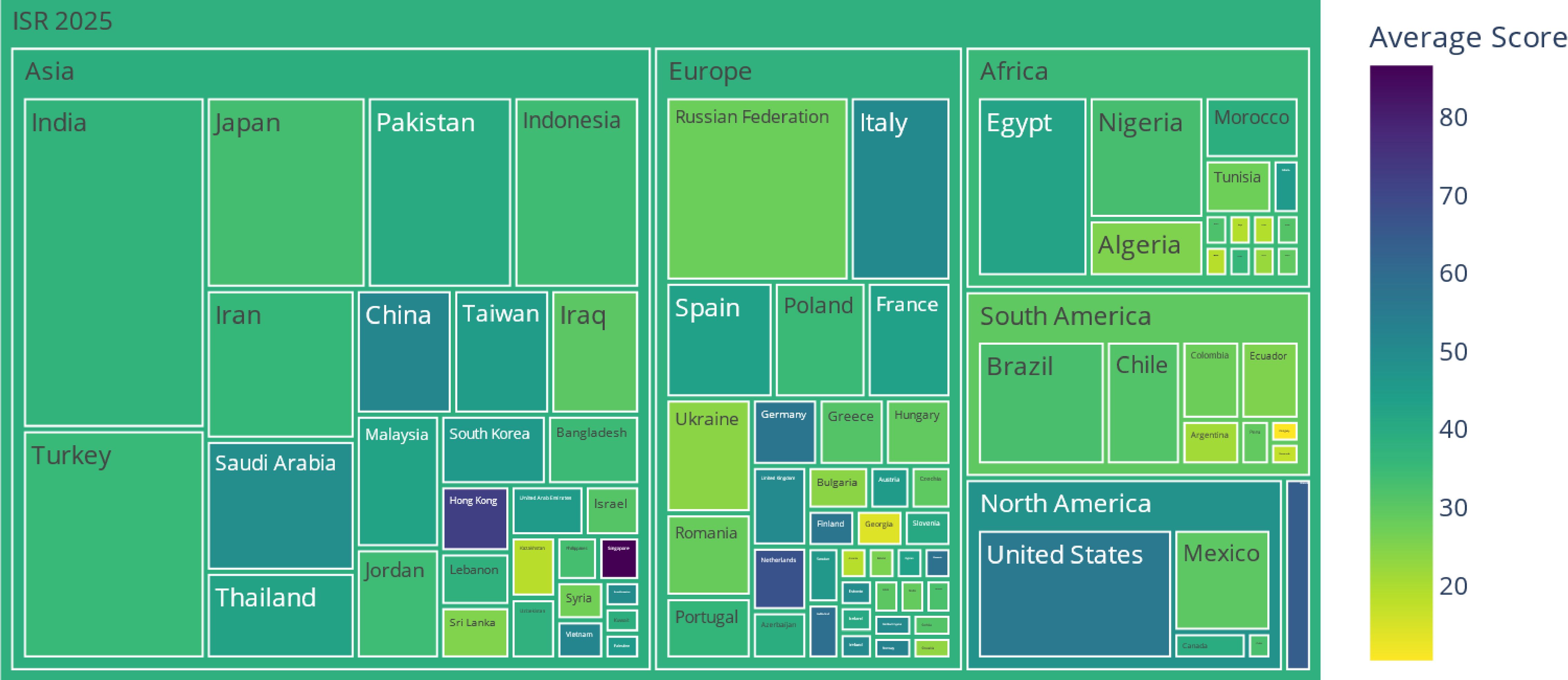
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# Country Representation



# Country Representation - Americas



# Global Top 10

 1 - Massachusetts Institute of Technology

 2 - Stanford University

 3 - National University of Singapore

 4 - California Institute of Technology

 5 - Duke University

 6 - University of Minnesota

 7 - Wageningen University & Research

 8 - University of California, Santa Barbara

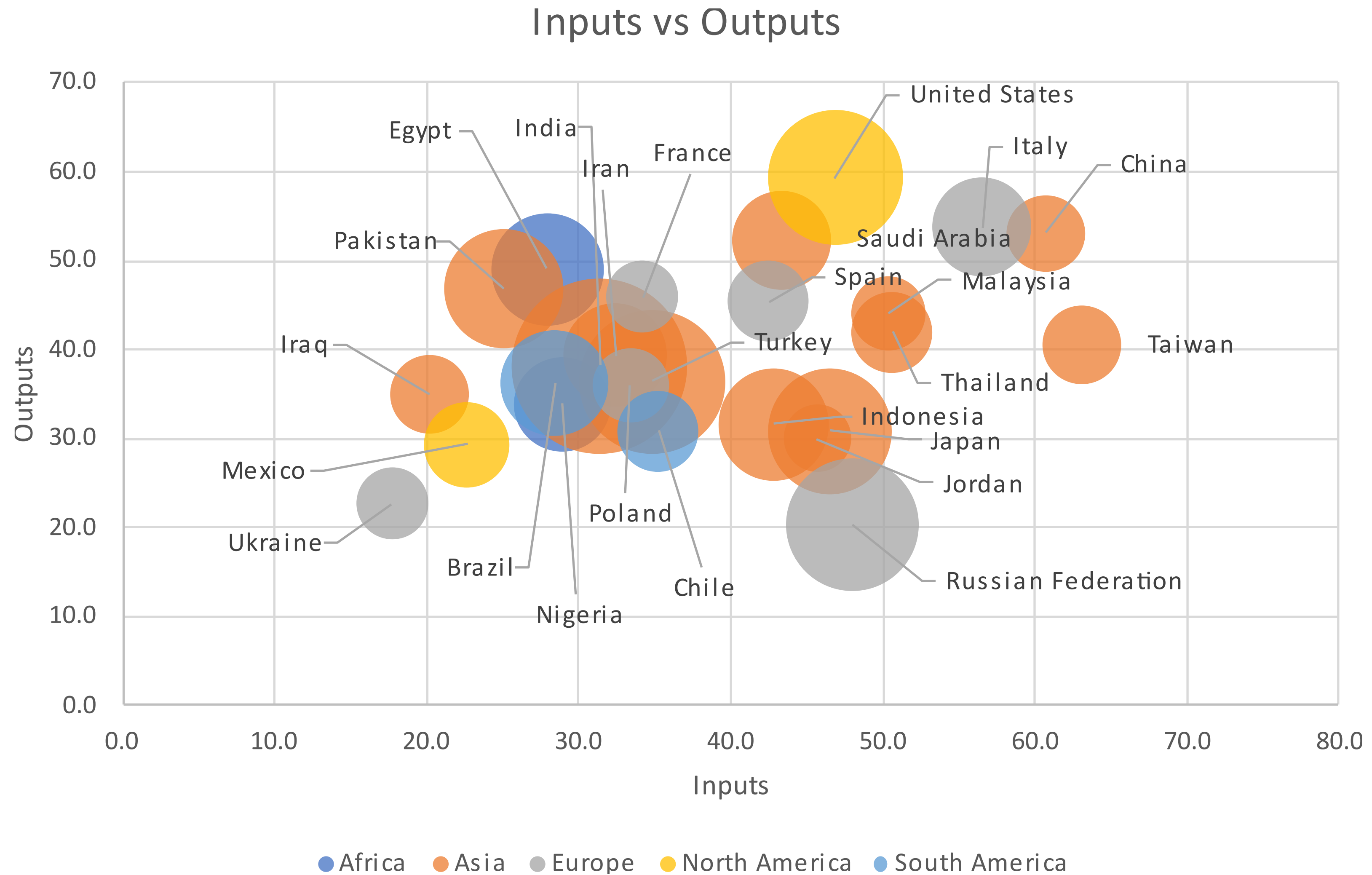
 9 - Nanyang Technological University, Singapore

 10 - University of Michigan-Ann Arbor

# Regional Highlights



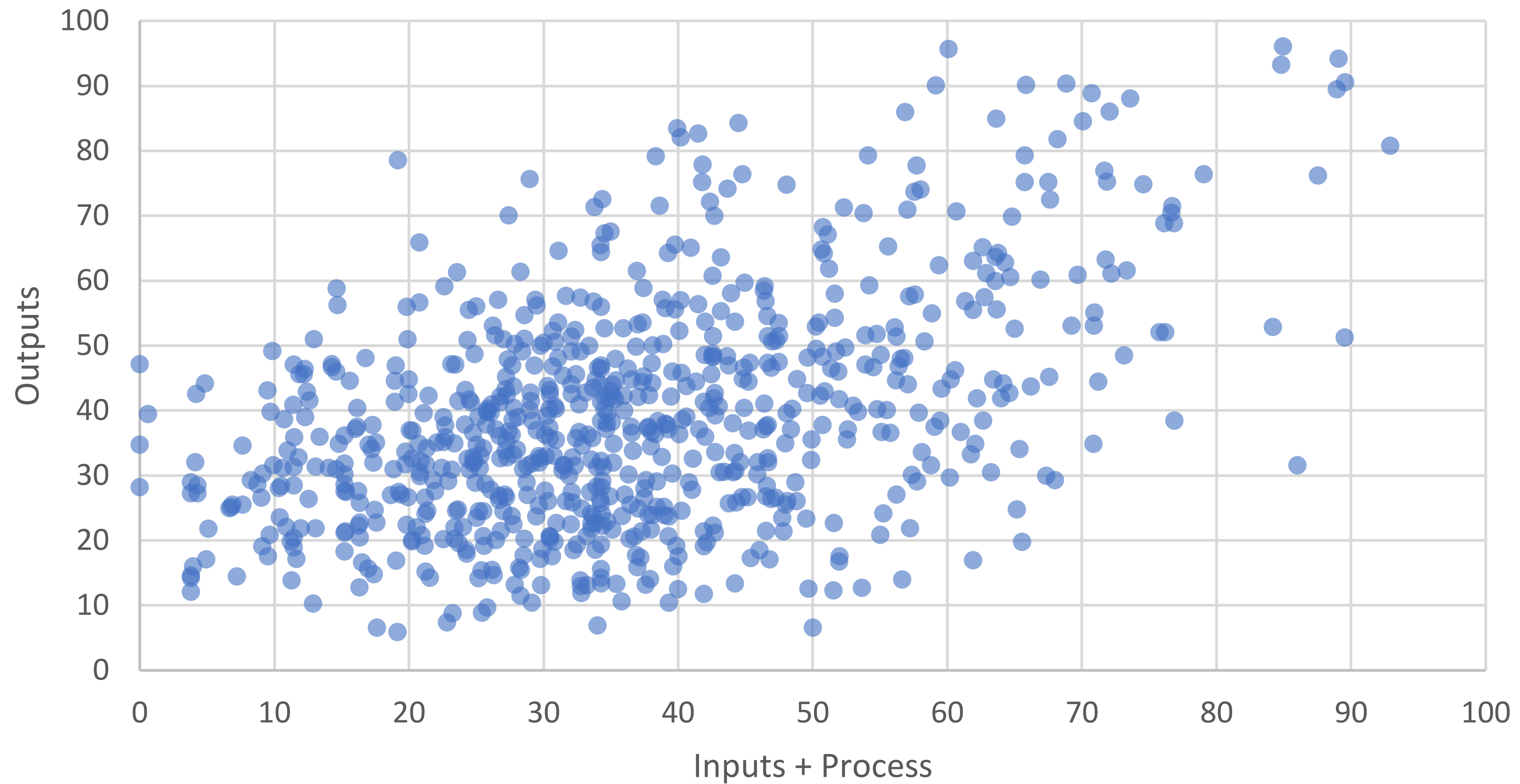
# Inputs vs Outputs



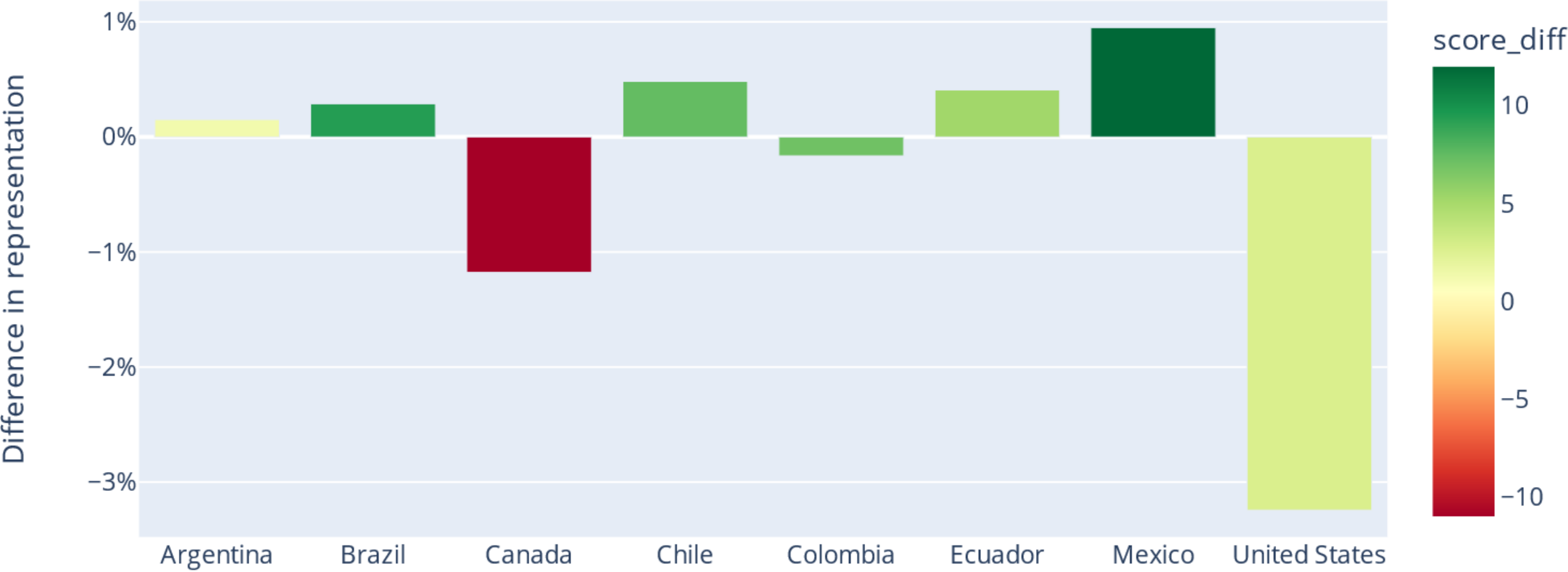


# Taking Process into Consideration

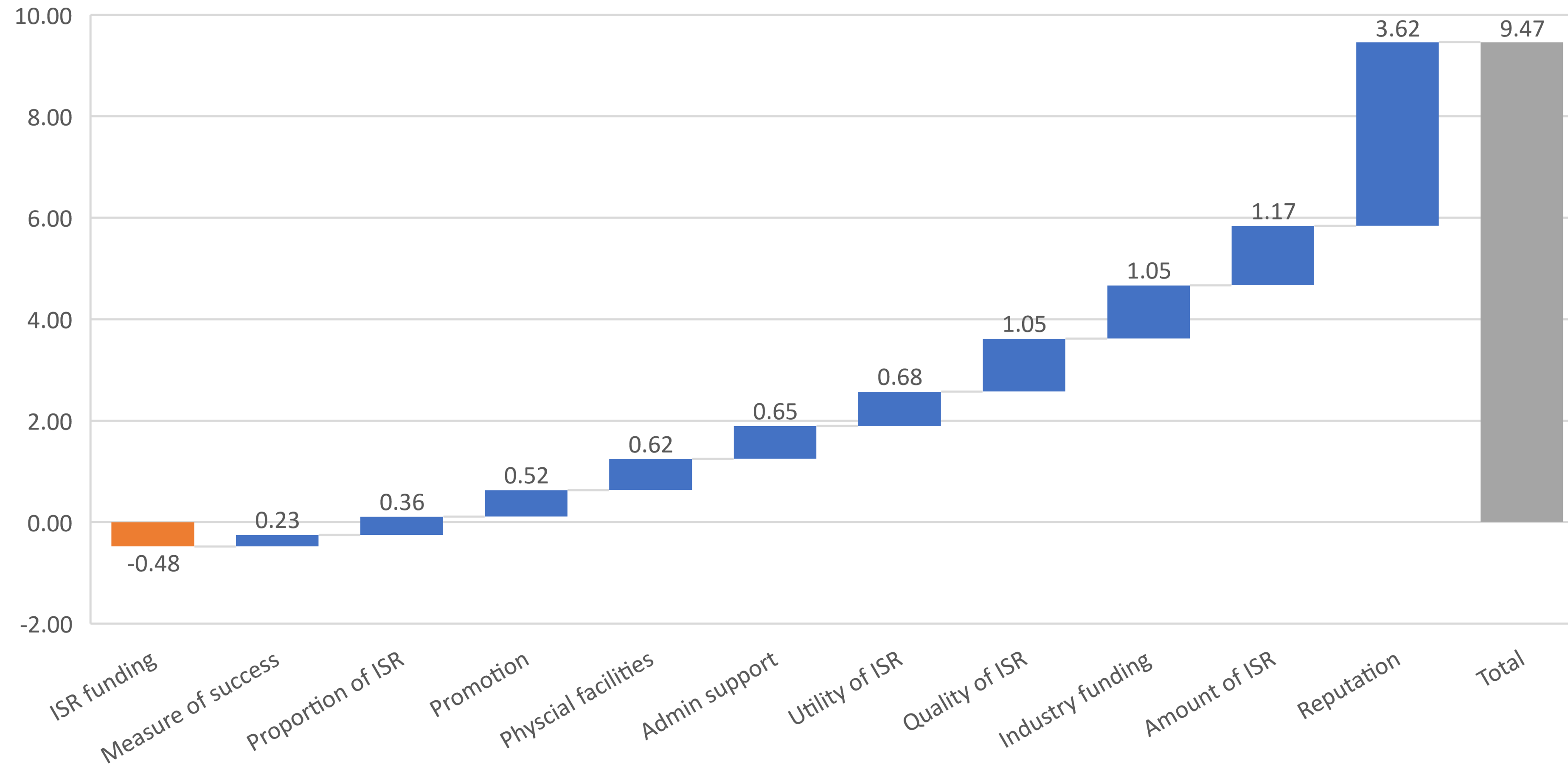
Inputs+Process vs Outputs



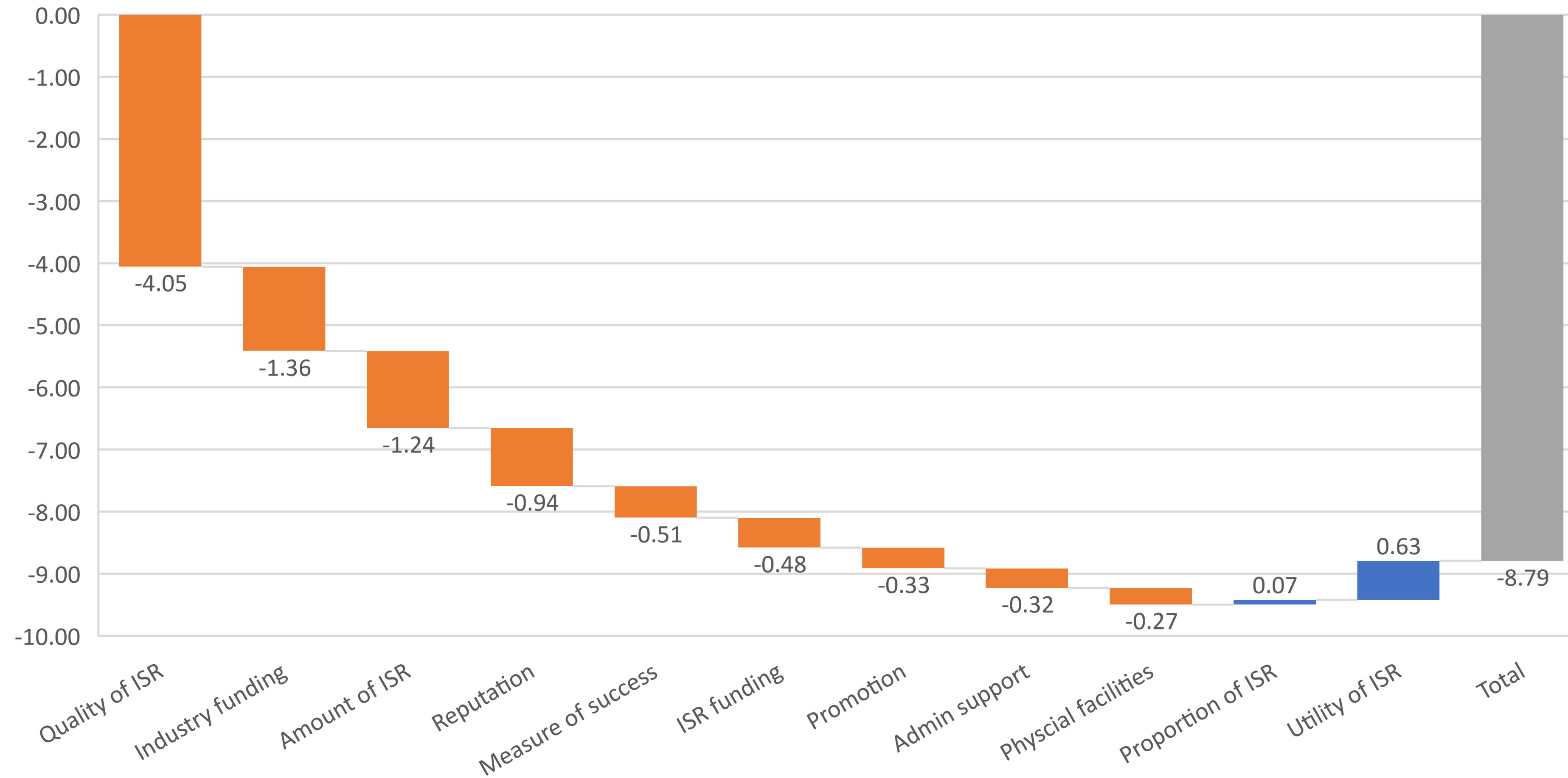
# Country level performance – ISR vs WUR



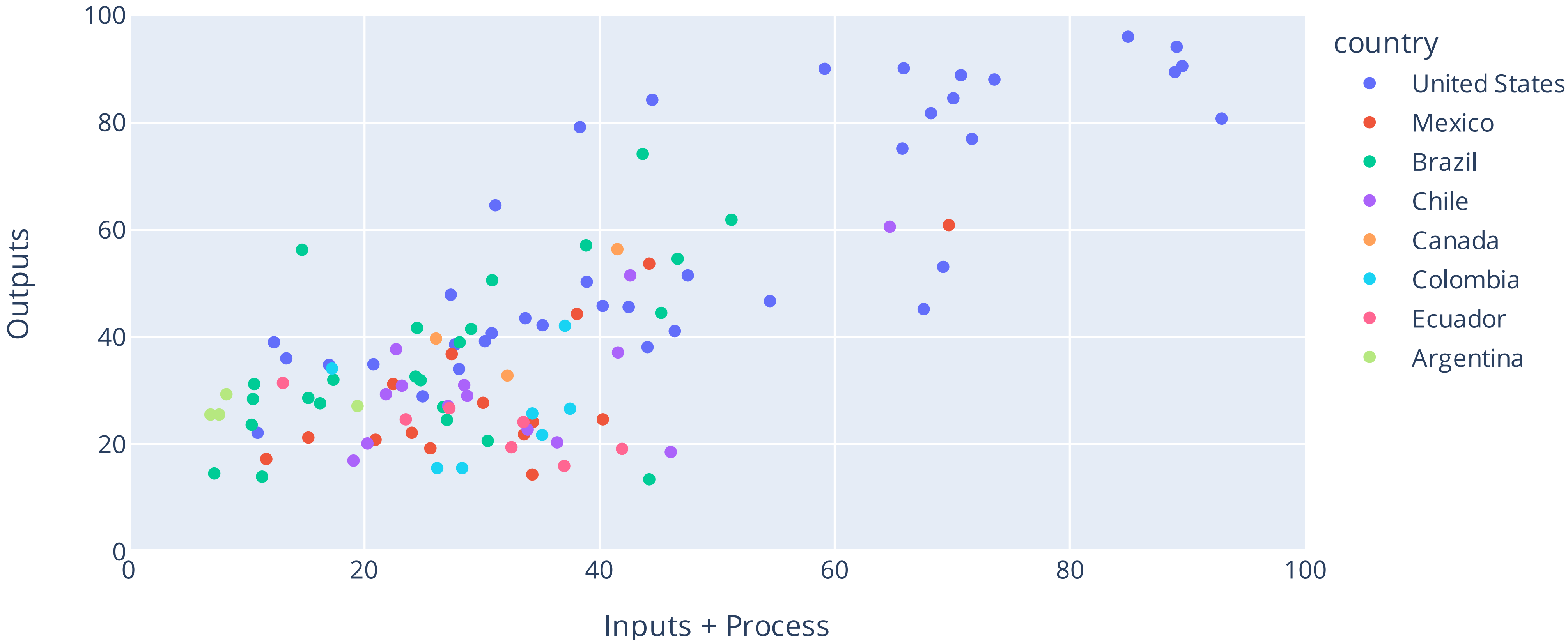
# How is the North America different?



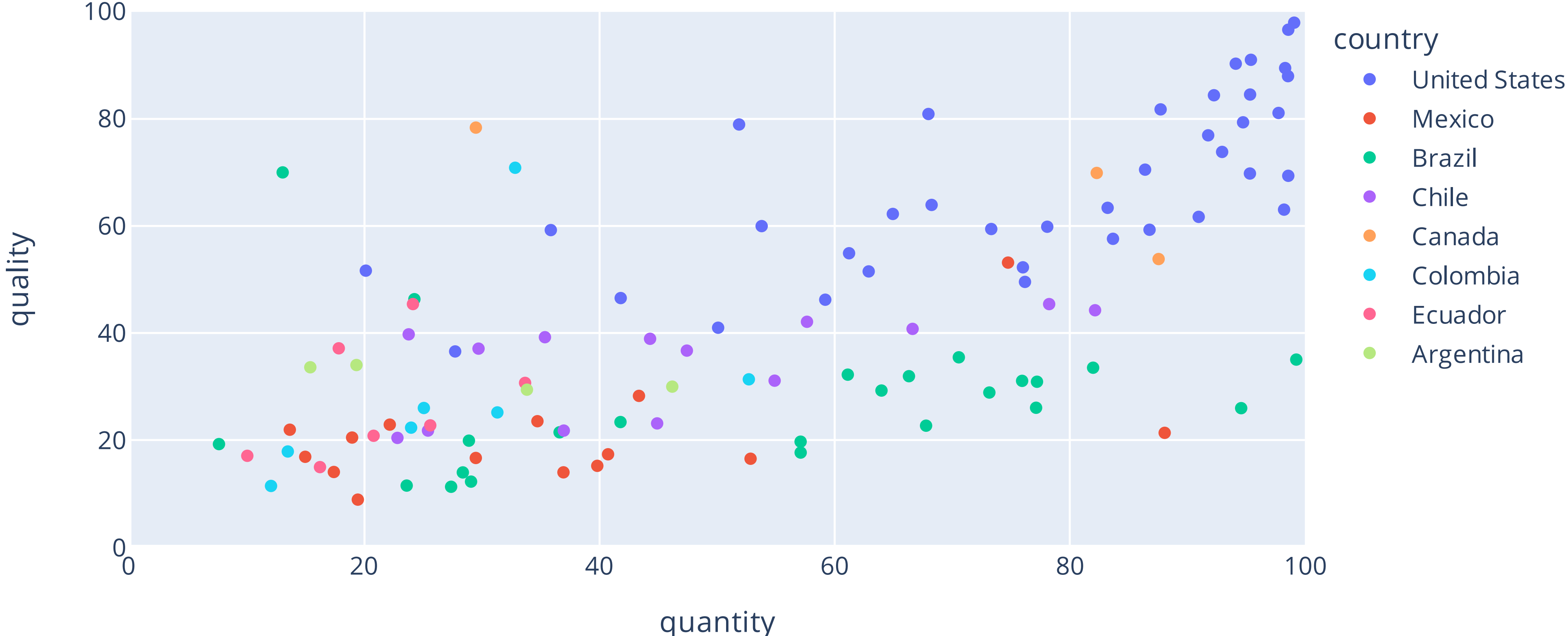
# How is the South America different?



# Which countries are unperforming their potential?



# Quality vs Quantity



# Perception vs Reality



# Case study – MIT Koch Institute

- Bringing together more than 1,000 biologists, biological, chemical, mechanical, and materials science engineers, chemists, computer scientists, clinicians, and others.
- A building design and community programs that encourage cross-pollination among scientists and engineers in shared research and social spaces.
- Its central location, situated where MIT's campus meets Cambridge's biotechnology hub in Kendall Square, facilitating collaboration with academic, clinical, and industry partners.
- Robust research centres, training and funding programs, and cutting-edge shared support facilities designed to help researchers translate their ideas into discoveries.



# Eligibility Criteria

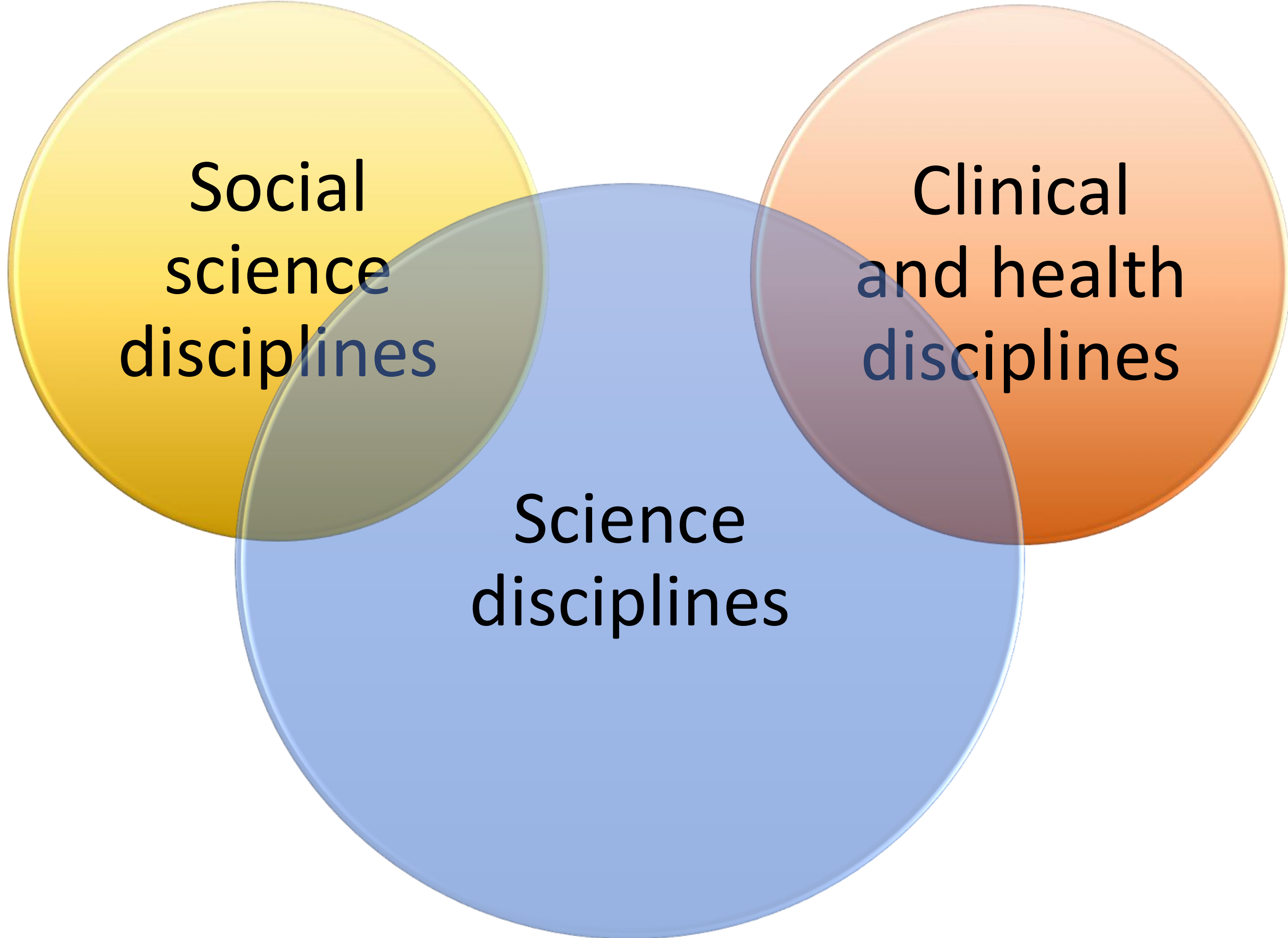
- Must submit data for THE World University Rankings
- Must declare at least one science subject as applicable
- Must publish at least 100 ISR publications within a 5-year window
- Must have at least 50 academics working in science subjects
- Must not have more than two missing metrics
- Must not be in THE's exclusion list

# How to participate

- New institutions – Register with us
  - Authorize a member of staff to provide data for your institution
- Registered institutions will receive notification for data submission soon. Data collection starts on 13 Jan 2025
- For general queries, please email [interdisciplinary@timeshighereducation.com](mailto:interdisciplinary@timeshighereducation.com)



# Changes in 2026



**Thank you for joining us**

